

ABSTRACT OF THE DISCLOSURE

An object of the invention is to provide a variable displacement compressor which is capable of using a solenoid control valve which does not require a large solenoid force. The compressor is configured such that an electromagnetic proportional flow rate control valve is arranged in a refrigerant passage leading from a discharge chamber to a condenser, that a differential pressure regulating valve is arranged in a refrigerant passage leading from the discharge chamber to a crank chamber, and that a fixed orifice is arranged in a refrigerant passage leading from the crank chamber to a suction chamber, whereby the differential pressure regulating valve senses a differential pressure P_d , P_d' generated across the electromagnetic proportional flow rate control valve, for control of pressure introduced into the crank chamber. Due to this configuration, the differential pressure regulating valve controls pressure P_c in the crank chamber such that the difference of pressure of refrigerant before and after passing through a restriction having openness set by the electromagnetic proportional flow rate control valve becomes constant, which makes the flow rate Q_d of discharged refrigerant constant irrespective of changes in the engine rotational speed, etc. Since the differential pressure can be controlled by a small solenoid force, the variable displacement compressor can be made compact in size.